

U.S. DEPARTMENT OF ENERGY
**Office of Electricity Delivery and
Energy Reliability**



ENERGY ASSURANCE DAILY

September 1, 2005

Highlights/Major Developments

Update: Hurricane Katrina

**OFFICE OF ELECTRICITY DELIVERY AND ENERGY RELIABILITY (OE)
U.S. DEPARTMENT OF ENERGY
Hurricane Katrina Situation Report #15
September 1, 2005 (6:00 PM EDT)**

HIGHLIGHTS

Approximately 1.8 million customers remain without electric power due to Hurricane Katrina. These are primarily in Louisiana, Mississippi, and Alabama -- 30 percent of customers in the three states are without power (see table below).

Region IV RRCC priorities are fuel, food and communications. Requests have been made to provide flood impact graphics for Region IV.

Inaccessibility as well as extensive damage from flooding and saltwater is a major issue impacting electricity restoration. Well over 10,000 outside crews have arrived to provide assistance; however, availability of line crews remains an issue. As Florida utilities finish their restoration work their crews have begun to move to other states. Entergy reports that its single biggest problem to restoring power in the Greater New Orleans area is the lack of food and water for its repair crews who are literally sleeping in their trucks. Earlier today, OE staff on site in Louisiana provided GIS coordinates to FEMA so that shipments can begin to these workers.

Electricity outages are impeding full restoration of the Colonial Pipeline, the LOOP, and the Plantation Pipeline. More detail about the status of these pipelines is available below (see Petroleum and Gas section).

PETROLEUM AND GAS INFORMATION

The LOOP is operational from St. James Terminal and by the evening of 9/2/05 they will have power to move crude from the LOOP to Clovelly and out to St. James Terminal. Limited electricity supplies are restricting flow.

The Strategic Petroleum Reserve at New Orleans Elmwood office complex remains shut down. Bayou Choctaw, Bryan Mound, Big Hill and West Hackberry storage sites, however, are operational and will be able to provide crude oil in the loan program noted above.

Colonial Pipeline is now operating at 40% of normal operating capacity. Once additional generators are activated at inactive pump stations, production will increase to 1.2 to 1.3 million barrels per day. Both gasoline and distillates are currently being transported and delivered. The line was full when it went down, so deliveries were possible within hours – not days – of restart. The company anticipates that it may be able to achieve approximately 74% of normal operating capacity by Sunday and 75% to 86% by early or mid-next week if additional electricity can be supplied to critical pump stations. Further increases cannot be made until normal power is restored. The capacity of Colonial is about 2.4 million barrels per day. Solutions for power restoration are being actively pursued.

Plantation has partially started its system as is operating at 25% of capacity and hopes to be up to 50% of normal operations by Friday.

Capline, a crude oil pipeline serving the Midwest, was restarted yesterday at a rate of 720,000 barrels a day and can operate at reduced rates until the LOOP is fully operational.

The Seaway Interstate Pipeline to Cushing, OK, is operating at full capacity (350,000 barrels a day). From Cushing, the Enbridge (Ozark) pipeline to Wood River and the BP pipeline to Chicago are operating at full capacity.

The following tables display refineries located in states impacted by Hurricane Katrina:

LA/MS/AL – Gulf Coast Refiner Impacts

Refinery	Location	State	Capacity (bbl/day)	Impact
ExxonMobil*	Baton Rouge	LA	493,500	Reduced Runs
Valero	Krotz Springs	LA	80,000	Reduced Runs
Placid Oil*	Port Allen	LA	48,500	Reduced Runs
ConocoPhillips*	Belle Chasse	LA	247,000	Shutdown major damage
Marathon	Garyville	LA	245,000	Shutdown – minor damage
Motiva (Shell)	Convent	LA	235,000	Shutdown – no assessment yet
Motiva (Shell)	Norco	LA	226,500	Shutdown – no assessment yet
Shell Chemical	St Rose	LA	55,000	Shutdown
Chalmette	Chalmette	LA	187,200	Shutdown – water damage
Valero	St. Charles	LA	185,000	Shutdown; 1 or 2 weeks; water damage
Murphy	Meraux	LA	120,000	Shutdown – water damage
ChevronTexaco*	Pascagoula	MS	325,000	Shutdown major damage
Shell Chemical	Saraland	AL	80,000	Shutdown; have power and should be up relatively soon

Port Arthur/Lake Charles Refiner Impacts

Refinery	Location	State	Capacity (bbl/day)	Impact
ExxonMobil*	Beaumont	TX	348,500	OK
Motiva (Shell)*	Port Arthur	TX	285,000	OK
Premcor	Port Arthur	TX	247,000	OK
Koch*	Corpus Christi	TX	156,000	OK
Total*	Port Arthur	TX	211,500	Reduced Runs (Mars)
Citgo*	Lake Charles	LA	324,300	OK receiving crude
ConocoPhillips*	Lake Charles	LA	239,400	Reduced runs

Capline Pipeline – Midwest Refiner Impacts

Refinery	Location	State	Capacity (bbl/day)	Impact
BP	Whiting	IN	410,000	Reduced Runs
BP	Toledo	OH	160,000	Reduced Runs
ExxonMobil*	Joliet	IL	238,000	OK
PDV Midwest	Lemont	IL	160,000	OK
Marathon	Robinson	IL	192,000	Reduced Runs
Marathon	Catlettsburg	KY	222,000	Reduced Runs
Marathon	Detroit	MI	74,000	OK
Marathon	Canton	OH	73,000	OK
ConocoPhillips	Wood River	IL	306,000	Reduced Runs
Premcor*	Memphis	TN	180,000	Reduced Runs
Premcor	Lima	OH	158,400	Reduced Runs
Sun	Toledo	OH	160,000	Not Available

* Refineries with company owned and operated on-site power generation.

ELECTRICITY INFORMATION

STATE OUTAGE DATA

Utility	Customers w/o Power	% Customers w/o Power from Katrina (1)
Alabama	235,213	10%
Louisiana	780,735	37%
Mississippi	774,244	55%
Total	1,790,192	30%

Less than 1 percent of customers in Georgia and Florida remain without power due to Katrina

STATE REPORTS

Alabama

Over 235, 000, or 10 percent of customers, remain without power in Alabama. This includes 197,000 Alabama Power customers, 28,213 Cooperative customers, and 10,000 Municipal customers. This is down from a peak Monday night of 636,891. Alabama Power crews have been assisted by utilities from at least 20 states and the District of Columbia. The company anticipates that 99 percent of power will be restored in the Birmingham area by the end of the day 9/2/05. Ninety-nine percent of power in Tuscaloosa will be restored by the end of the day 9/4/05, and 99 percent of all customers will be restored by September 7. The storm is the worst on record as far as damage to the company's infrastructure. Outages by division are as follows:

- Birmingham: 38,617
- Tuscaloosa: 35,463
- Mobile: 132,779

For cooperatives, the worst hit counties are Monroe, Choctaw, Clarke, Baldwin, and Marion. Approximately 400 crew members from out of state are helping in the restoration of the co-ops.

Mississippi and Louisiana

Louisiana has 780,735 customers remaining without power as reported by the Louisiana Public Service Commission (11:00AM 9/1/05). Electricity service in Louisiana areas not impacted by flooding is slowly being restored.

In Mississippi 774,244 customers are without power, 55 percent of customers in the state. Of these, 190,759 are in the Entergy service area; 181,000 are in the Mississippi Power service area; 449,000 are in the Mississippi Electric Power Association service area; and 113,289 are in the TVA area.

Mississippi Power estimates that about 70 percent of its 8,000 miles of transmission and distribution lines will need to be repaired or replaced. Over 2,500 outside crews arrived Tuesday to provide assistance. About 5,000 outside crews are expected to be available by today. Mississippi Power estimates that it may take as long as four weeks to restore power in hard-hit areas.

At 11 a.m., Sept. 1, Entergy's transmission system had 98 lines and 98 substations out of service. The company is working to restore service for pumping, sanitation, and housing facilities in the Central Business District of New Orleans as well as the west bank of Jefferson Parish. Aerial damage assessments should be substantially completed by the end of the day; however, access to flooded facilities is limited and preventing detailed assessments. Restoration of the transmission system in this area is progressing well except in the areas impacted by flood waters, which includes over thirty substations in the New Orleans area. Salt water flooding in this area is expected to impact substation restoration due to damaged equipment.

Entergy now has 9,000 line and vegetation workers restoring service. Entergy is in contact with other utilities and contract workers to bring in additional workers and pre-position as many out-of-state utility crews as possible to quickly move in to help restore service. The company website reports that flooding, fuel supply and other barriers will make restoration more difficult.

Louisiana Outages by Major Utility (9/1/05 11:00 AM)

Electric Utility	Customers w/o Power	% customers w/o power
Entergy Louisiana Inc	391,118	60%
Entergy Gulf States Inc	51,277	15%
Cleco Power LLC	79,672	31%
Entergy New Orleans Inc	200,751	93%
Dixie Electric Membership Corp	24,005	28%
Washington-St Tammany E C, Inc	20,000	48%
South Louisiana Elec Coop Assn	13,912	73%

Florida

As of 1:00 PM 9/1/05, approximately 10,400 customers, less than 1 percent of customers in the state, remain without power in Florida due to Katrina. Florida Power & Light is releasing 1,000 line crews to support restoration in Gulf Coast States. Utilities in Florida are encouraging conservation by customers due to concerns about natural gas supplies. The Florida Reliability Coordinating Council issued a generating alert, calling for conservation of electricity.

Additional Information

Gulf of Mexico Shut-in Production MMS release #3331

Based on the latest data available from the Minerals Management Service, 51.65% of 819 manned platforms and 47.76% of 137 rigs currently operating in the GOM have been evacuated as of 11:30 a.m. August 30. Shut-in oil production is 1,356,498 BOPD or 90.43% of daily production (which is currently approximately 1.5 million BOPD), and shut-in gas is 7.866 BCFPD or 78.66% of daily production (which is currently approximately 10.0 BCFPD). The cumulative shut-in oil production for the period 8/26/05 – 9/01/05 is 7,441,566 bbls or 1.359% of annual production. The cumulative shut-in production for the period 8/26/05 – 9/01/05 is 42.079 BCF of 1.153% of annual production

Hurricane Katrina Evacuation and Production Shut-in Statistics Report as of Thursday, September 1, 2005

This survey is reflective of 68 companies' reports as of 11:30 a.m. Central Time.

Districts	Lake Jackson	Lake Charles	Lafayette	Houma	New Orleans	Total
Platforms Evacuated	34	74	62	91	162	423
Rigs Evacuated	3	9	13	22	17	64
Oil, BOPD Shut-in	28,646	44,315	228,109	344,118	711,310	1,356,498
Gas, MMCF/D Shut-In	498.85	1,649.93	990.55	1,874.26	2,852.44	7,866.03

Note: The cumulative numbers reflect updated production numbers from all previous reports. The reports only represent input received by 11:30 a.m. CDT. If a company does not report by 11:30 a.m. it is not included in the special information release, but it is included in the cumulative shut-in production. This may result in an apparent increase in the cumulative report amount.

<http://www.mms.gov/ooc/press/2005/press0901.htm>

Other Sources of Information

Damage to Gulf Coast refineries has cut daily jet fuel production by 13 percent, the [Air Transport Association](#) said Wednesday. That represents 200,000 fewer barrels of jet fuel out of 1.5 million barrels produced daily before the storm, ATA said. Jet fuel supplies were tight at airports the past two months even before Katrina hit.

[http://news.yahoo.com/news?tmpl=story&u=/usatoday/20050901/bs_usatoday/shortageloomsifjetfueldisrupti
onnotfixedsoon](http://news.yahoo.com/news?tmpl=story&u=/usatoday/20050901/bs_usatoday/shortageloomsifjetfueldisrupti
onnotfixedsoon)

Although the FAA has stated that based on latest information available to it, that supplies of jet fuel are sufficient to fully meet continued commercial operations, others believe that major airports in the East and Southeast could run out of jet fuel in the next week or two if refinery and pipeline shutdowns aren't resolved soon. Shortages appear most severe at airports in Charlotte, Tampa, Orlando and Fort Myers, Fla. But two of the USA's busiest airports could also be affected - Atlanta's Hartsfield-Jackson and Washington Dulles. Even when refineries and pipelines come back on-line, the high demand for gasoline (to avoid shortages) production by these plants will continue to keep jet fuel supplies very tight.

Reuters 14:31, September 1, 2005

[http://news.yahoo.com/news?tmpl=story&u=/usatoday/20050901/bs_usatoday/shortageloomsifjetfueldisrupti
onnotfixedsoon](http://news.yahoo.com/news?tmpl=story&u=/usatoday/20050901/bs_usatoday/shortageloomsifjetfueldisrupti
onnotfixedsoon)

Planes are carrying more fuel than would be normally needed to avoid drawing down fuel supplies at Charlotte, Tampa, Orlando, Fort Myers and several other cities according to ATA.

[http://news.yahoo.com/news?tmpl=story&u=/usatoday/20050901/bs_usatoday/shortageloomsifjetfueldisrupti
onnotfixedsoon](http://news.yahoo.com/news?tmpl=story&u=/usatoday/20050901/bs_usatoday/shortageloomsifjetfueldisrupti
onnotfixedsoon)

Although no airlines have canceled flights because of a lack of fuel thus far, closed airports in the Southeast have resulted in hundreds of flight cancellations.

In addition to problems with its Capline pipeline, Shell has indicated that four other pipelines carrying refined oil products between New Orleans and Baton Rouge, Louisiana are also shutdown because of power outages and a lack of supply from refineries closed by the hurricane.

http://quote.bloomberg.com/apps/news?pid=10000103&sid=a8vRcenQdXL4&refer=news_index

Long gasoline lines are reported in West Virginia by the head of the West Virginia Oil Marketers and Grocers Association. Many stations in and around downtown Atlanta had run out of gas by sunrise. The same is reported in parts of Alabama, Georgia, North Carolina, West Virginia, Wisconsin and Arizona.

<http://www.altustimes.com/articles/2005/09/01/ap/business/d8cbdr02.txt>

<http://www.katu.com/consumernews/story.asp?ID=79349>

<http://www.sfgate.com/cgi-bin/article.cgi?f=/n/a/2005/09/01/financial/f072229D66.DTL&feed=rss.news>

http://www.herald-zeitung.com/wire.lasso?report=/dynamic/stories/K/KATRINA_GAS_PRICES_HK3

Electricity

Teco Energy Expects Delays in Coal Shipments to Tampa Electric

Utility operator Teco Energy indicated that coal shipments to Tampa Electric are expected to be delayed due to halted operations at Teco's Bulk Terminal facility in Louisiana. Supply remains ample at the terminal facility, but flooding and power failures have stopped shipments. Teco said that operations would resume as soon as possible.

Reuters 9:47, September 1, 2005

Ontario Power Generation's Pickering 1 Expected to Begin Service Soon

The 515-megawatt unit 1 at the Pickering nuclear generating station is expected to enter commercial service in October. The station is located on the north shore of Lake Ontario, 30 miles east of Toronto, and has not operated since December 1997.

Reuters 11:42, September 1, 2005

Duke's 846-MW Oconee 3 Shuts Down

The Oconee 3 nuclear reactor in South Carolina automatically shut down during a diagnostic test yesterday. Duke is currently investigating the cause of the problem.

Bloomberg 9:27, September 1, 2005

Reuters 16:21, September 1, 2005.

OPG's 515 MW Unit 6 at its Pickering Nuclear Generating Station in Ontario Shut August 31

Reuters 16:21, September 1, 2005.

OPG's 535 MW Unit 2 at its Lennox Oil/Gas-fired Generating Facility in Ontario Shut September 1

Reuters 16:21, September 1, 2005.

AES's 415 Gas-fired Unit 5 at its Alamos Generating Facility in California Shut August 31.

Reuters 16:23, September 1, 2005.

Petroleum

U.S. Gasoline Prices at the Pump Reach Record Average

Average gasoline pump prices surged 36 cents overnight to a record-high \$2.99 per gallon. Hurricane damage to oil refineries in the coastal areas have made it difficult for retailers to secure supplies. A record \$5.68 per gallon of gasoline was reported in Atlanta, Georgia.

Bloomberg 12:21, September 1, 2005

Placid Refining Co. - Approved for Oil from Strategic Reserve

The U.S. Department of Energy approved Placid Refining Co.'s request for one million barrels of crude oil from the Strategic Petroleum Reserve. Placid expects to receive crude at its Port Allen, Louisiana refinery by the end of next week. The refinery normally processes 49,000 barrels of oil per day, but operations ceased this week after the effects of Hurricane Katrina shut a supply pipeline.

Bloomberg 17:13, August 31, 2005

ExxonMobil - Approved for Oil from Strategic Reserve

On Thursday, the Department of Energy approved ExxonMobil Corp.'s request for six million barrels of crude oil from the Strategic Petroleum Reserve. ExxonMobil will borrow three million barrels of sweet crude and three million barrels of sour crude from the reserve.

Reuters 14:17 September 1, 2005

Valero Requests Crude from Strategic Petroleum Reserve

Valero Energy Corp. requested 1.5 million barrels of crude oil from emergency stockpiles on Thursday.

Valero, the largest U.S. oil refiner, is at least the fourth refiner this week to request crude from the Strategic Petroleum Reserve. Energy Secretary Samuel Bodman said yesterday that as much as five million barrels of crude oil per day could be accessed from federal reserves.

Bloomberg 11:56, September 1, 2005

Marathon to Restart Garyville Refinery During the Weekend

Marathon announced that it would restart its 245,000 refinery in Garyville, Louisiana during the coming weekend. The company said that it has already begun heating some of the units in preparation for the restart of production.

Reuters 14:01 September 1, 2005.

Dixie Propane Pipeline Shut Down

The 1,301-mile propane pipeline operated by Phillips remains shut down due to the effects of hurricane Katrina. The pipeline collects propane from fractionators and refiners in the Gulf region and transports it to customers throughout the southeast.

Reuters 10:23, September 1, 2005

http://www.epplp.com/bs_ngl_p_o.html

Nigerian Pipeline Fire Forces Shell to Shut some Oil Production

A fire in a main gas pipeline in Nigeria forced Shell to cut gas and oil shipments to an export facility. Only a small amount of oil (12,000 b/d) was shut in as a result.

Reuters 12:12, September 1, 2005.

Houston Exploration – Initial damage Assessment

Some 63 MMcf/d of production remains shut-in

Reuters 14:00, September 1, 2005.

Helmerich & Payne Inc – Initial damage Assessment

According to the company, one rig of eight sustained damage losing a derrick and sustaining a damaged substructure.

Reuters 13:22, September 1, 2005.

Swift Energy - Initial Damage Assessment

Swift Energy's aerial survey indicates that all infrastructure appears to be in place. A more complete assessment must be made to determine when facilities will be restarted.

http://pro.energycentral.com/professional/news/gas/news_article.cfm?id=5915764

Transocean – Initial Damage Assessment

The company has begun an initial damage assessment, the Deepwater Nautilus rig has sustained significant damage, the rig has been secured approximately 80 miles from its original location. Other moored rigs appear to have sustained no damage. Other dynamically positioned rigs are returning to their pre-storm locations and did not sustain damage.

http://pro.energycentral.com/professional/news/gas/news_article.cfm?id=5917435

PetroQuest – Initial Damage Assessment

PetroQuest Energy's initial visual inspection indicated that all of its facilities sustained no damage.

http://pro.energycentral.com/professional/news/gas/news_article.cfm?id=5917946

For additional information on petroleum, see Highlights/Major Developments

Natural Gas

Maintenance Could be Deferred at Canadian Refineries to Help U.S.

Canadian oil companies may defer their fall maintenance programs to provide additional supplies to the U.S. in an effort to help mitigate the fuel shortages developing in the aftermath of hurricane Katrina.

Reuters 15:00, September 1, 2005.

Construction to Begin on Entrega Natural Gas Pipeline

Construction is expected to begin soon on the new Entrega natural gas pipeline in the Rocky Mountains. Further details are not available at this time.
Business Wire 8:06, September 1, 2005

For additional information on natural gas, see Highlights/Major Developments

Other News

Nothing to Report

Energy Prices

	Latest (09/01/05)	Week Ago	Year Ago
CRUDE OIL West Texas Intermediate US \$/Barrel	69.50	67.29	49.56
NATURAL GAS Henry Hub \$/Million Btu	11.36	9.77	6.36

Source: Reuters

This Week in Petroleum from the Energy Information Administration (EIA)

<http://tonto.eia.doe.gov/oog/info/twip/twip.asp>

Updated on Wednesdays

Weekly Petroleum Status Report from EIA

http://www.eia.doe.gov/oil_gas/petroleum/data_publications/weekly_petroleum_status_report/wpsr.html

Updated after 1:00pm (Eastern time) on Wednesdays

Natural Gas Weekly Update from EIA

<http://tonto.eia.doe.gov/oog/info/ngw/ngupdate.asp>

Updated after 2:00 pm (Eastern time) on Thursdays

ENSEC threat awareness blog site from Energy Assurance

<http://ensec.blogspot.com>